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RULEMAKING ESTABLISHING ELECTRIC WEATHERIZATION STANDARDS	§ § §	PUBLIC UTILITY COMMISSION OF TEXAS

COMMENTS OF EXELON GENERATION COMPANY, LLC

Exelon Generation Company, LLC ("Exelon")[1] respectfully files these Comments with the Public Utility Commission of Texas ("Commission" or "PUCT") addressing proposed new 16 Texas Administrative Code (TAC) §25.55, as applies to generation entities.

EXECUTIVE SUMMARY

Exelon appreciates the Commission's prioritization of electric generation weatherization measures, focusing first on those that most immediately solve for known issues, including making the recommendations contained in the Quanta Report new mandates for generation entities. With the modifications discussed below, the proposed rule will provide for economically rational investment, under time frames that are consistent with good utility practice, and meet the system needs under good engineering practice.

BACKGROUND AND INTRODUCTION

In the aftermath of Winter Storm Uri, Exelon is evaluating its electric generating resources and taking certain actions, irrespective of any changes in the law or in ERCOT protocols.

[1] Exelon Generation Company, LLC, through subsidiaries, owns 3,620 MWs of gas-fired capacity and 87 MWs of wind power in Texas. Exelon Generation Company, LLC also provides wholesale supply to a number of Texas cooperatives and municipalities.

On August 26, 2021, the Commission proposed new 16 Texas Administrative Code (TAC) §25.55, which it indicated was designed "to implement weather emergency preparedness measures for generation entities and transmission service providers in the Electric Reliability Council of Texas (ERCOT) region, as required by Senate Bill 3 (SB 3), 87th Legislature Session (Regular Session)." SB 3, which was passed by the Texas Legislature and signed into law by Governor Abbott on June 8, 2021, includes the following relevant excerpt (emphasis added):

> Sec. 35.0021. WEATHER EMERGENCY PREPAREDNESS.
> (a) This section applies only to a municipally owned utility, electric cooperative, power generation company, or exempt wholesale generator that sells electric energy at wholesale in the ERCOT power region.
> (b) The commission by rule shall require each provider of electric generation service described by Subsection (a) **to implement measures to prepare the provider's generation assets** to provide adequate electric generation service during a weather emergency according to reliability standards adopted by the commission. In adopting the rules, the commission shall take into consideration weather predictions produced by the office of the state climatologist.

The proposed rule continues: "Specifically, the proposal requires generators to implement the winter weather readiness actions identified in the 2012 Quanta Technology Report on Extreme Weather Preparedness Best Practices and to fix any known, acute issues that arose during the 2020 – 2021 winter weather season." Exelon offers the below recommendations to improve generators' ability to combat winter weather conditions, while conforming with the law and the stated intent of the rule.

RECOMMENDATIONS AND DISCUSSION

A. Adjust the Language in (c)(1)(A) to Reflect the Preparedness Standard

The statutory language in SB 3 clearly sets a preparedness standard, and that is what the proposed new 25.55 purports to be. However, the precise phrasing used in subsection (c)(1)(A),

"[a]ll preparations necessary to ensure the sustained operations", departs from the stated objectives in two important respects. First, the proposed rule requires that **all** preparations be completed. That qualifier is overly broad, covering an almost limitless set of weatherization preparations, without regard to duplication of preparations, their cost/economic benefits, or whether or not they are tied to the Quanta Report or an identified risk based on historical performance. Second, the phrase "necessary to ensure the sustained operation" converts the rule to a performance standard, rather than a preparedness standard as required under the law and acknowledged by the narrative to be the objective of the proposed rule.

In setting out a list of items such as "chemicals, auxiliary fuels, and other materials, and personnel", Exelon interprets the goal of this subsection as requiring electric generators to undertake and complete their typical operations and maintenance activities to transition from summer to winter operations by December 1. For example, a generator would need to ensure that supplies are on hand in order to avoid having to source needed items immediately before, or potentially in the middle of, emergency conditions. Exelon applauds that requirement for proper planning, and suggests that the language be modified to more closely mirror the letter and spirit of the law and the stated objectives.

> (A) All typical preparations intended ~~necessary~~ to ensure the sustained operation of all cold weather critical components during normal winter weather conditions…

B. Modify Installation and Enclosure Requirements under (c)(1)(B)

Subsection (c)(1)(B) requires the installation and enclosure of particular items that are not necessary and in fact could be counter-productive if performed by December 1. For example, the proposed rule requires "[i]nstallation of adequate wind breaks for resources susceptible to outage or derates caused by wind." Although installing the wind break skeleton and having other

resources on hand is appropriate preparation to provide a head start if there is notice of a potential cold weather system emergency, installing the actual wind breaks themselves is not only expensive and takes manpower and other resources, but installation when not needed can raise the temperature of the unit unnecessarily and create greater stress on the unit, potentially making it unable to perform when needed most. Instead, generators should be required to implement freeze protection preparations that allow the generation unit to run efficiently, and enable quick execution of freeze protection measures if extreme weather conditions were anticipated.

Necessity, feasibility, and costs should be considered and included in the rule. Although protection of sensors in some sense is warranted, physical enclosure of sensors may not be necessary, would add costs, and may not be feasible by December 1. Exelon suggests flexibility regarding what protection may be appropriate. Relatedly, although Exelon agrees that monitoring of cold weather critical components should occur, monitoring can take many forms. Installation of monitoring systems for some components may not be necessary, and would only add costs. Additionally, generators would likely be unable to meet a December 1 deadline for procuring and installing monitoring systems, given timing and resource constraints. Installation of monitoring systems, where warranted and cost-effective, should have a later implementation date, though some form of monitoring should be required by December 1.

> (B) Create an inventory of resources for adequate wind breaks, preparation for temporary i~~I~~nstallation of protection in anticipation of extreme cold weather events ~~adequate wind breaks for resources susceptive to outages or derates caused by wind~~; ~~enclosure of,~~ protect sensors for cold weather critical components …
>
> …
>
> … provide for the ~~installation of~~ monitoring ~~systems for~~ of cold weather critical components, including circuitry providing freeze protection or preventing instrument air moisture …

C. Adjust the Language in (c)(1)(C) to Reflect the Preparedness Standard

As with subsection (c)(1)(A), the precise phrasing used in subsection (c)(1)(C), "[a]ll actions necessary to prevent a reoccurrence of any cold weather critical component failure", is problematic in two important respects. First, the proposed rule requires that **all** actions necessary to prevent a reoccurrence be completed. That qualifier is overly broad, covering an almost limitless set of weatherization preparations, without regard to duplication of preparations, their cost/economic benefits. Second, the phrase "necessary to prevent a reoccurrence" converts the rule to a performance standard, rather than a preparedness standard as required under the law and acknowledged by the narrative to be the objective of the proposed rule.

Exelon agrees that generators should be required to take steps intended to prevent a reoccurrence of failures of cold weather critical components that occurred during the Winter Storm. Exelon has evaluated and taken steps regarding its own thermal generation resources with that goal in mind. However, no matter what efforts are taken, there is no guarantee that there will not be a reoccurrence, and the rule should not impose a performance standard. The focus should be on actions that are reasonably expected to prevent a reoccurrence of a failure.

> (C) ~~All a~~Actions reasonably necessary to prevent a reoccurrence of any cold weather critical component failure that occurred in the period between November 30, 2020, and March 1, 2021.

D. Tailor The Requirement for Operating Limitations under (c)(1)(E)

The manufacturing limitations for electric generation resources may not be readily available. For example, Exelon owns and operates the Handley electric generating resource, which is 60 years old, and was acquired from a previous owner. The original design basis is therefore unknown. Although Exelon is not suggesting that generators such as Handley be exempt from identifying operating limitations, the design basis such as specific design temperature, minimum operating temperature, and other operating limitations based on temperature, humidity, wind

speed, and direction may not be precisely known. Exelon suggests that generator owners be required to provide data based on observed operating limitations, which is the best indicia of a unit's actual capabilities.

> (E) Determination of minimum design temperature, historical minimum operating temperature, ~~and~~ or other observed operating limitations based on temperature, precipitation, humidity, wind speed, and wind direction.

E. Require Attestation Of the Appropriate Person Under (c)(2)(B)

Subsection (c)(2)(B) requires an attestation by "the highest ranking" individual "with binding authority over the generation entity". In the case of a generation entity with one or more affiliates, it may not be clear who that person is, nor does it make the best use of corporate resources to potentially require a CEO of a large parent corporation to attest to the actions taken by employees of the generation subsidiary. Exelon suggests that the attestation should be provided by the officer closest to the generating entity's capabilities, which is an officer of the generation entity itself, consistent with its Commission registration.

> (B) Includes, a notarized attestation sworn to by ~~the~~ an officer of the generation entity with responsibility for the generation entity's operations ~~highest ranking representative, official, or officer with binding authority over the generation entity~~
> ...

F. Provide For Appropriate Professional Engineer Assessment

Subsection (e) requires an assessment by an unaffiliated qualified professional engineer for a resource that experiences repeated or major weather-related forced interruptions of service. While an engineering assessment may be helpful for most resources in the event of outages, this requirement should exclude an outage of a wind resource due to freezing of turbines. The fact of

their freezing does not require any special level of engineering expertise, nor are there practical engineering solutions that would prevent the freezing of turbines in the future.

Exelon recommends that an engineer that has performed an assessment of a generation entity not be excluded from performing future assessments. Outages may occur for any number of reasons, and a potentially limited pool of skilled engineers exists. The fact that an engineer provided an assessment and the generating unit subsequently suffered a failure does not indicate a bias on the part of the engineer that should exclude him or her from providing an assessment. However, if an engineer repeatedly approves preparation measures, plans, procedures and operations that prove to be inadequate, that brings into question whether the individual meets the definition of a qualified professional engineer, as is required under the proposed rule.

> (e) For a generation entity with a resource that experiences repeated or major weather-related forced interruptions of service, including forced outages~~, derates,~~ or maintenance-related outages, with the exception of icing on wind turbines, the generation entity must contract with a qualified professional engineer who is not an employee of the generation entity or its affiliate ~~and who has not participated in previous assessments for the resource~~ to assess its weather emergency preparation measures, plans, procedures, and operations …

CONCLUSION

For the foregoing reasons, Exelon respectfully requests that the Commission modify the proposed rule, consistent with the above.

Respectfully submitted,

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On behalf of Exelon Generation Company, LLC

§25.55. Weather Emergency Preparedness.

(a) **Application.** This section applies to the Electric Reliability Council of Texas, Inc. (ERCOT) and to generation entities and transmission service providers in the ERCOT power region.

(b) **Definitions.** In this section, the following definitions apply unless the context indicates otherwise.

(1) **Cold weather critical component –** Any component that is susceptible to freezing, the occurrence of which is likely to lead to unit trip, derate, or failure to start.

(2) **Energy storage resource –** An energy storage system registered with ERCOT for the purpose of providing energy or ancillary services to the ERCOT grid and associated facilities behind the system's point of interconnection necessary for the operation of the system.

(3) **Generation entity –** An ERCOT-registered resource entity acting on behalf of an ERCOT-registered generation resource or energy storage resource.

(4) **Generation resource –** A generator capable of providing energy or ancillary services to the ERCOT grid and that is registered with ERCOT as a generation resource, as well as associated facilities behind the generator's point of interconnection necessary for the operation of the generator.

(5) **Inspection** – The activities that ERCOT engages in to determine whether a generation entity is in compliance with subsection (c) of this section or whether a transmission service provider is in compliance with subsection (f) of this section. An inspection may include site

visits; assessments of procedures; interviews; and review of information provided by a generation entity or transmission service provider in response to a request by ERCOT, including review of evaluations conducted by the generation entity or transmission service provider or its contractor. ERCOT will determine, in consultation with the commission, the number, extent, and content of inspections and may conduct inspections using both employees and contractors.

(6) **Resource** – A generation resource or energy storage resource.

(7) **Weather emergency preparation measures –** Measures that a generation entity or transmission service provider takes to support the function of a facility in extreme weather conditions, including weatherization, fuel security, staffing plans, operational readiness, and structural preparations.

(c) **Phase one weather emergency preparedness reliability standards for a generation entity.**

(1) By December 1, 2021, a generation entity must complete the following winter weather emergency preparations for each resource under its control:

(A) All typical preparations ~~necessary~~ intended to ensure the sustained operation of all cold weather critical components during normal winter weather conditions, such as chemicals, auxiliary fuels, and other materials, and personnel required to operate the resource;

(B) Create an inventory of resources for adequate wind breaks and preparation for temporary ~~i~~installation of protection in anticipation of extreme cold weather events ~~adequate wind breaks for resources susceptible to outages or derates caused by wind~~; ~~enclosure of~~protect sensors for cold weather critical components; inspection of thermal

insulation for damage or degradation and repair of any damaged or degraded insulation; confirmation of the operability of instrument air moisture prevention systems; maintenance of freeze protection components for all equipment, including fuel delivery systems, the failure of which could cause an outage or derate, and establishment of a schedule for testing of such freeze protection components on an ongoing monthly basis; and provide for the ~~installation of~~ monitoring ~~systems for~~ of cold weather critical components, including circuitry providing freeze protection or preventing instrument air moisture;

(C) ~~All a~~Actions reasonably necessary to prevent a reoccurrence of any cold weather critical component failure that occurred in the period between November 30, 2020, and March 1, 2021;

(D) Provision of training on winter weather preparations to operational personnel; and

(E) Determination of minimum design temperature, historical minimum operating temperature, ~~and~~ or other observed operating limitations based on temperature, precipitation, humidity, wind speed, and wind direction.

(2) By December 1, 2021, a generation entity must submit to ERCOT, on a form prescribed by ERCOT and developed in consultation with commission staff, a winter weather readiness report that:

(A) Describes all activities taken by the generation entity to complete the requirements of paragraph (1) of this subsection; and

(B) Includes, a notarized attestation sworn to by ~~the~~ an officer of the generation entity with responsibility for the generation entity's operations ~~highest-ranking representative, official, or officer with binding authority over the generation entity~~, attesting to the completion of all activities described in paragraph (1) of this subsection and the

accuracy and veracity of the information described in paragraph (2)(A) of this subsection.

(3) Based on the requirements of paragraph (1) of this subsection, ERCOT must develop a comprehensive checklist form that includes checking systems and subsystems containing cold weather critical components and file it with the commission no later than December 10, 2021. In addition, ERCOT must use a generation entity's winter weather readiness report submitted under paragraph (2) of this subsection to adapt the checklist to the inspections of the generation entity's resources.

(4) No later than December 10, 2021, ERCOT must file with the commission a summary report of the winter weather readiness reports filed under paragraph (2) of this subsection, including a summary of compliance with the requirements of paragraph (1) and (2) and a spreadsheet that delineates compliance with the requirements of paragraph (1) for all resources subject to those requirements.

(5) A generation entity that timely submits to ERCOT the winter weather readiness report required by paragraph (2) of this subsection is exempt, for the 2021 calendar year, from the requirement in Section 3.21(3) of the ERCOT Protocols that requires a generation entity to submit the Declaration of Completion of Generation Resource Winter Weatherization Preparations no earlier than November 1 and no later than December 1 of each year.

(6) Good cause exception. A generation entity may submit a request for a good cause exception with the commission to specific requirements listed in paragraph (1) of this subsection.

(A) A generation entity's request must include:

(i) A detailed explanation and supporting documentation of the generation entity's inability to comply with a specific requirement of paragraph (1) of this subsection;

(ii) A detailed description and supporting documentation of the generation entity's efforts that have been made to comply with paragraph (1) of this subsection;

(iii) A plan, including a schedule and supporting documentation, to comply with the specific requirement of paragraph (1) of this subsection for which the good cause exception is being requested from the commission, including a proposed deadline or deadlines for filing updates with the commission on the status of the generation entity's compliance with the specific requirement of paragraph (1) of this subsection and expected compliance date;

(iv) Evidence that notice of the request has been provided to ERCOT; and

(v) A notarized attestation sworn to by the generation entity's highest-ranking representative, official, or officer with binding authority over the generation entity attesting to the accuracy and veracity of the information in the request.

(B) ERCOT is a required party in the proceeding in which a generation entity requests a good cause exception from the commission. ERCOT must make a recommendation to the commission on the request by the deadline set forth by the presiding officer in the proceeding.

(d) **Inspections for a generation entity.**

(1) ERCOT inspections. ERCOT must conduct inspections of resources for the 2021 – 2022 winter season and must prioritize its inspection schedule based on risk level. ERCOT may prioritize inspections based on factors such as whether a generation resource is critical for

electric grid reliability; has experienced a forced outage, forced derate, or failure to start related to extreme weather conditions; or has other vulnerabilities related to extreme weather conditions.

(2) ERCOT inspection report. ERCOT must provide a report on its inspection of a resource to the generation entity. The inspection report must address whether the resource has complied with the requirements in subsection (c) that ERCOT reviewed for the resource and, if the resource has not complied, ERCOT must provide the generation entity a reasonable period to cure the identified deficiencies. The cure period determined by ERCOT must consider what weather emergency preparation measures the generation entity may be reasonably expected to have taken before ERCOT's inspection, the reliability risk of the resource's noncompliance, and the complexity of the measures needed to cure the deficiency.

(e) **Weather-related failures by a generation entity to provide service.** For a generation entity with a resource that experiences repeated or major weather-related forced interruptions of service, including forced outages~~, derates,~~ or maintenance-related outages, with the exception of icing on wind turbines, the generation entity must contract with a qualified professional engineer who is not an employee of the generation entity or its affiliate ~~and who has not participated in previous assessments for the resource~~ to assess its weather emergency preparation measures, plans, procedures, and operations. The generation entity must submit the qualified professional engineer's assessment to the commission and ERCOT. ERCOT must adopt rules that specify the circumstances for which this requirement applies and specify the scope and contents of the assessment. A generation entity to which this subsection applies may be subject to additional inspections by ERCOT. ERCOT must refer to the commission for

enforcement any generation entity that violates this rule and fails to cure the identified deficiencies within a reasonable period of time.

(f) **Weather emergency preparedness reliability standards for a transmission service provider.**

(1) By December 1, 2021, a transmission service provider must complete the following winter weather preparations for its systems and facilities:

(A) All preparations necessary to ensure the sustained operation of all cold weather critical components during winter weather conditions, including ensuring availability of supplies, such as chemicals, auxiliary fuels, and other materials, and personnel required to operate the transmission system and facilities;

(B) Confirmation of the ability of all systems and subsystems containing cold weather critical components required to operate each of the transmission service provider's substations to ensure operation of each substation within the design and operating limitations addressed in subparagraph (1)(H) of this paragraph;

(C) All actions necessary to prevent a reoccurrence of any cold weather critical component failure that occurred in the period between November 30, 2020 and March 1, 2021;

(D) Provision of training on winter weather preparations to operational personnel;

(E) Confirmation that the sulfur hexafluoride gas in breakers and metering and other electrical equipment is at the correct pressure and temperature to operate safely during extreme cold weather, and performance of annual maintenance that tests sulfur hexafluoride breaker heaters by supporting circuitry to assure that they are functional;

(F) Confirmation of the operability of power transformers in extreme cold temperatures by:

(i) Checking heaters in the control cabinets;

(ii) Verifying that main tank oil levels are appropriate for actual oil temperature;

(iii) Checking bushing oil levels; and

(iv) Checking the nitrogen pressure if necessary;

(G) Determination of the ambient temperature to which the transmission service provider's equipment, such as fire protection systems, are protected, including accounting for the accelerated cooling effect of wind, and confirmation that temperature requirements are met during operations; and

(H) Determination of minimum design temperatures, minimum operating temperatures, and other operating limitations based on temperature, precipitation, humidity, wind speed, and wind direction for substations containing cold weather critical components.

(2) By December 1, 2021, a transmission service provider must submit to ERCOT, in a form prescribed by ERCOT and developed in consultation with commission staff, a winter-weather readiness report that:

(A) Describes all activities taken by a transmission service provider to complete the requirements of paragraph (1) of this subsection; and

(B) Includes a notarized attestation sworn to by the transmission service provider's highest-ranking representative, official, or officer with binding authority over the transmission service provider, attesting to the completion of all activities described in paragraph (1) of this subsection and the accuracy and veracity of the information described in paragraph (2)(A) of this subsection.

(3) No later than December 10, 2021, ERCOT must file with the commission a summary report of the winter weather readiness reports filed under paragraph (2) of this subsection, including a summary of compliance with the requirements of paragraph (1) and (2) and a

spreadsheet that delineates compliance with the requirements of paragraph (1) for all facilities subject to the requirements.

(4) Good cause exception. A transmission service provider may submit a request for a good cause exception with the commission to specific requirements listed in paragraph (1) of this subsection.

(A) The request must include:

(i) A detailed explanation and supporting documentation of the inability of the transmission service provider to comply with a specific requirement of paragraph (1) of this subsection;

(ii) A detailed description and supporting documentation of the efforts that have been made to comply with paragraph (1) of this subsection;

(iii) A plan, including a schedule and supporting documentation, to comply with the specific requirement of paragraph (1) of this subsection for which the good cause exception is being requested from the commission, including a proposed deadline or deadlines to file updates with the commission on the status of the transmission service provider's compliance and expected compliance date;

(iv) Evidence that notice of the request has been provided to ERCOT; and

(v) A notarized attestation sworn to by the transmission service provider's highest-ranking representative, official, or officer with binding authority over the transmission service provider attesting to the accuracy and veracity of the information in the request.

(B) ERCOT is a required party to the proceeding in which a transmission service provider requests a good cause exception from the commission. ERCOT must make a

recommendation to the commission on the request by the deadline set forth by the presiding officer in the proceeding.

(g) Inspections for a transmission service provider.

(1) ERCOT inspections. ERCOT must conduct inspections of transmission systems and facilities for the 2021 – 2022 winter season and must prioritize its inspection schedule based on risk level. ERCOT may prioritize inspections based on factors such as whether a transmission system or facility is critical for electric grid reliability; has experienced a forced outage or other failure related to extreme weather conditions; or has other vulnerabilities related to extreme weather conditions.

(2) ERCOT inspection report. ERCOT must provide a report on its inspection of a transmission system and facilities to the transmission service provider. The inspection report must address whether the system and facilities have complied with the requirements in subsection (f) of this section that ERCOT reviewed for the transmission service provider, and, if the transmission service provider has not complied, provide the transmission service provider a reasonable period to cure the identified deficiencies. The cure period determined by ERCOT must consider what weather emergency preparation measures the transmission service provider may be reasonably expected to have taken before ERCOT's inspection, the reliability risk of the transmission service provider's noncompliance, and the complexity of the measures needed to cure the identified deficiencies.

(h) **Weather-related failures by a transmission service provider to provide service**. For a transmission service provider with a transmission system or facility that experiences repeated or major weather-related forced interruptions of service, including forced outages, derates, or

maintenance-related outages, the transmission service provider must contract with a qualified professional engineer who is not an employee of the transmission service provider or its affiliate and who has not participated in previous assessments for this system or facility to assess its weather emergency preparation measures, plans, procedures, and operations and submit the assessment to the commission and ERCOT. ERCOT must adopt rules that specify the circumstances for which this requirement applies and specify the scope and contents of the assessment. A transmission service provider to which this subsection applies may be subject to additional inspections by ERCOT. ERCOT must refer to the commission for enforcement any transmission service provider that violates this rule and fails to cure the identified system or facility deficiencies within a reasonable period of time.